

Claims

1. A method of providing information relating to a telecommunication call, in a telecommunication network, to a data storage system, the method comprising:

receiving caller identity information at an exchange of the network during a call set-up procedure between a calling device and the exchange, and storing the information at least temporarily at the exchange;

10 sending an incoming call alert message to a called device;

prior to receiving a call answer message at the exchange, or in direct response to receipt of a call answer message, outputting from the exchange to said data storage system a Call Data Record containing at least the received and stored caller identity information.

2. A method according to claim 1, wherein the telecommunication network comprises a cellular radio telephone network and the call is made from a cellular radio telephone device.

3. A method according to claim 2, wherein the cellular radio telephone network is a GSM network and said exchange from which the Call Data Record is output is a Mobile Switching Center, the method comprising outputting from the Mobile Switching Center at least one of the subscriber telephone number, IMEI code, or IMSI code.

4. A method according to claim 1, wherein the telecommunication network comprises a fixed access network in which telephone device is coupled to the exchange via land lines, the method comprising outputting from the exchange at least the caller's telephone number (A-number).

claim 1

a 5. A method according to ~~any one of the preceding claims~~ and comprising outputting said call data record to an external billing system.

5 6. Apparatus for providing information relating to a telecommunication call, in a telecommunication network, to a data storage system (10), the apparatus comprising:

10 first receiving means (8) for receiving caller identity information at an exchange (1) of the network during a call set-up procedure between a calling device (4) and the exchange (1), and for storing the information at least temporarily at the exchange (1);

15 transmitting means (9) for transmitting an incoming call alert message to a called device (5);

second receiving means (9) for receiving, in the event that the called device (5) answers or otherwise accepts the incoming call alert, a call answer message sent to the exchange (1); and

20 output means (11) for outputting, prior to or in response to receipt of said call answer message, from the exchange (1) to said data storage system (10), a Call Data Record containing at least the received and stored caller identity information.

25 7. Apparatus according to claim 6, wherein said first and second receiving means (8,9), said transmitting means (9), and said output means (11) are provided as an integral part of the network exchange (1), and said data storage system (10) is physically separate from the exchange (1).

a 35 8. Apparatus according to claim 6 or 7, the network comprising a cellular radio telephone network and said exchange (1) being a Mobile Switching Centre (MSC) of the cellular network.

9. A telecommunication network having a plurality of interconnected exchanges for routing calls in the network, and a billing system coupled to each of said exchanges, each exchange comprising:

5 first receiving means (8) for receiving caller identity information during a call set-up procedure between a calling device (4) and the exchange (1), and for storing the information at least temporarily at the exchange (1);

transmitting means (9) for transmitting an incoming call alert message to a called device (5) or to a called device (5) via one or more further exchanges (1);

15 second receiving means (9) for receiving, in the event that the called device (5) answers or otherwise accepts the incoming call alert, a call answer message sent to the exchange (1); and

20 output means (11) for outputting, prior to or in response to receipt of said call answer message, from the exchange (1) to a data storage system (10), a Call Data Record containing at least the received and stored caller identity information.

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11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100